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Note : Remove "Table of Content" before including in CP Book

Each Course Plan shall be printed and made into a book with cover page

Blooms Level in all sections match with A.2, only if you plan to teach / learn at higher levels

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15CS553 : ADVANCED JAVA AND J2EE

A. COURSE INFORMATION

1. Course Overview

Degree:	B.E	Program:	CS
Year / Semester :	V Sem 'A & 'B'	Academic Year:	2018-19
Course Title:	JAVA AND J2EE	Course Code:	15CS553
Credit / L-T-P:	3-0-0	SEE Duration:	180 Minutes
Total Contact Hours:	40	SEE Marks:	80 Marks
CIA Marks:	20	Assignment	1 / Module
Course Plan Author:	RAJESH. V	Sign	Dt: 4-8-2018
Checked By:	NAGA RATHNA	Sign	Dt: 4-8-2018

2. Course Content

Mod	Module Content	Teaching	Module	Blooms
ule		Hours	Concepts	Level
1	Enumeration fundamentals, the values() and valueOf() Methods, java enumerations are class types, enumerations Inherits Enum, example, type wrappers, Autoboxing, Autoboxing and Methods, Autoboxing/Unboxing occurs in Expressions, Autoboxing/Unboxing, Boolean and character values, Autoboxing/Unboxing helps prevent errors, A word of Warning. Annotations, Annotation basics, specifying retention policy, Obtaining Annotations at run time by use of reflection,	8	Enumeration java class methods Annotation Syntactic meta data	L2 L2
	Annotated element Interface, Using Default values, Marker Annotations, Single Member annotations, Built-In annotations.		AutoBoxing wrapper classes	L2
2	Collections Overview, Recent Changes to Collections, The Collection Interfaces, The Collection Classes, Accessing a collection Via an Iterator, Storing User Defined Classes in Collections, The Random Access Interface, Working With Maps, Comparators, The Collection Algorithms, Why Generic Collections?, The legacy Classes and Interfaces, Parting Thoughts on Collections.	8	Collection classes and interfaces Legacy classes and interfaces	L3 L2
3	The String Constructors, String Length, Special String Operations, String Literals, String Concatenation, String Concatenation with Other Data Types, String Conversion and toString() Character Extraction, charAt(), getChars(), getBytes() toCharArray(), String Comparison, equals() and equalsIgnoreCase(), regionMatches() startsWith() and endsWith(), equals() Versus == , compareTo() Searching Strings, Modifying a String, substring(), concat(), replace(), trim()), Data Conversion Using valueOf(), Changing the Case of Characters Within a String, Additional String Methods, StringBuffer , StringBuffer Constructors, length() and capacity(), ensureCapacity(), setLength(), charAt() and setCharAt(), getChars(),append(), insert(), reverse(), delete() and deleteCharAt(), replace(), substring(), Additional StringBuffer Methods, StringBuilder	8	String class Methods. String Buffer class Methods.	L3 L3
4	Using Tomcat for Servlet Development; A simple Servlet; The Servlet API; The Javax.servlet Package; Reading Servlet Parameter; The Javax.servlet.http package; Handling HTTP Requests and Responses; Using Cookies; Session Tracking.	8	Servlet API's JSP API's	L3 L3
	Java Server Pages (JSP): JSP, JSP Tags, Tomcat, Request String, User Sessions, Cookies, SessionObjects		Session Management	L2

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5	The Concept of JDBC; JDBC Driver Types; JDBC Packages; A	8	JDBC/ODBC	L3
	Brief Overview of the JDBC process; Database Connection;		API's	
	Associating the JDBC/ODBC Bridge with the Database;			
	Statement Objects; ResultSet; Transaction Processing;		Transaction	
	Metadata, Data types; Exceptions.		processing	L2

3. Course Material

Mod	Details	Available
ule		
1	Text books	In Lib
	1. Herbert Schildt: JAVA the Complete Reference, 7 /9th Edition, Tata McGraw	Available
	Hill, 2007.	
	2. Jim Keogh: J2EE-TheCompleteReference, McGraw Hill, 2007.	Available
2	Reference books	In dept
	1. Herbert Schildt: JAVA the Complete Reference, 7 /9th Edition, Tata McGraw	Available
	Hill, 2007.	
	2. Jim Keogh: J2EE-TheCompleteReference, McGraw Hill, 2007.	Available
3	Others (Web, Video, Simulation, Notes etc.)	
	 <u>http://nptel.ac.in/courses.php?disciplineID=111</u> 	
	<u>http://wwww.khanacademy.org/</u>	
	 http://vtuplanet.com/download.php? 	
	type=notes&dir=7th+Sem&file=JAVA+%26+J2EE+(SJBIT)+	
	%5B10IS753%5D-NOTES.pdf	

4. Course Prerequisites

SNo	Course Code	Course Name	Module / Topic / Description	Sem	Remarks	Blooms Level
1	15PCD13	C Programing 8 Data structures	Module 2 : Branching and Looping	1	Branching and looping concepts were taught earlier.	L3
2	15CS45	OOPS	Module 1 : Introduction to Object Oriented Concepts	3	Object Oriented programing, Inheritance,Polymorphi sm, Operator Overloading	L2
3	15CS33	Data Structures	Module 2,3,4 : Stacks and Queue's, Linked list, Trees	3	Understanding, application and implementation of Stacks ,Queues, Linked list, and Trees.	L3
4	15CS45	OOPS	Module 1 : Object Oriented programming and procedure oriented programming, java and C++	3	Difference between object Oriented programming and procedure oriented programming, C++ Classes Difference between C++ and Java	L2

B. OBE PARAMETERS

1. Course Outcomes

#		COs		Teach.	Concept	Instr	Assessmen	Blooms'
				Hours		Method	t Method	Level
15CS553.1	Understand	Enumeration	and	06	Enumeratio	Lecture	Slip Test	L2
	Autoboxing in	Developing E	fficient		ns	and PPT	Q&A	Understand

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	Java Programs.		AutoBoxing			
15CS553.2	Understand Annotations for developing Efficient Java Programs	02	Annotations	Lecture and PPT Demonst ration	Assignment Unit Test Student PPT, Q&A Slip Test	L2 Understand
15CS553.3	Apply Collection Classes and Interfaces for Data Management	06	Collections Framework	Lecture and PPT, Demonst ration	Assignment , Slip Test,Q&A	L3 Apply
15CS553.4	Understand Legacy Classes for Data Management and compare with collection classes.	02	Legacy Classes	Lecture and PPT	Assignment Q & A	L2 Understand
15CS553.5	Apply String classes for String Processing Applications.	04	String Classes	Lecture and Tutorial	Slip test , Q&A	L3 Apply
15CS553.6	Apply String Buffer classes for String processing applications.	04	String Buffer Classes	Lecture and Tutorial	Slip test Q&A	L3 Apply
15CS553.7	Apply Servlet API classes for developing Web application	04	Servlets	Lecture and PPT, Demonst ration	Assignment and Student PPT	L3 Apply
15CS553.8	Apply JSP API classes and Interfaces for Web application	04	JSP	Lecture and PPT, Demonst ration	Assignment and Student PPT	L3 Apply
15CS553.9	Apply JDBC/ODBC Classes and Interfaces for handling Databases in Java/J2ee Applications.	06	Handling JDBC	Lecture and PPT	Assignment and Student PPT	L3 Apply
15CS553.10	Understand Transaction processing mechanism for Data base application programming.	02	Transaction Processing	Lecture and Tutorial	Assignment and Student PPT	L2 Understand
-	Total	40	-	-	-	-

Note: Identify a max of 2 Concepts per Module. Write 1 CO per concept.

2. Course Applications

SNo	Application Area	CO	Level
1	 We can use enum types when we need to represent a fixed set of constants. We can use enums when a variable can take one out of a small set of possible values Enum considered more type-safe than constants: One of the common use of enums is to prevent the possibility of an invalid parameter. to use an instance of a particular type as an instance of another, related type (use a String as an Object) 	CO1	L2 Unders tand
2	 annotation is used to describe the element and clarify its meaning. advanced application for annotations involves reflection and annotation processing at run-time. 	CO2	L2 Unders tand

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3	 Java Collections Framework provides lots of different useful data types, Java Collections Framework provides abstractions 	CO3	L3 VlqqA
4	 legacy classes are re-engineered to support generics in JDK5 Vector class is one among them. All legacy classes are synchronized 	CO4	L2 Unders tand
5	 String class is used to create and manipulate strings. String objects are immutable so it is used in a constant and cannot be changed once created. 	CO5	L3 Apply
6	 StringBuffer provides much of the functionality of strings. StringBuffer is used for growable and writable character sequences. 	CO6	L3 Apply
7	 Servlets are commonly used to extend the applications hosted by web servers. Servlets are most popularly used for generating dynamic content on the Web and have native support for HTTP. 	CO7	L3 Apply
8	 JavaServer Pages allows us to integrate with our existing Java Enterprise solutions, JavaServerPages can be used in the presentation layer, 	CO8	L3 Apply
9	 Java JDBC is used to connect and execute query with the database. JDBC drivers are written in Java language it is more secured. 	CO9	L3 Apply
10	 Transaction processing is crucial requirements for large enterprise applications in the domains of finance, banking and electronic commerce. Transcation processing is used for Component Based Development. 	CO10	L2 Unders tand

Note: Write 1 or 2 applications per CO.

3. Articulation Matrix

(CO – PO MAPPING)

-	Course Outcomes	e Outcomes Program Outcomes												
#	COs	PO1	PO2	PO3	PO4	PO5	PO	PO7	PO8	PO9	PO1	PO1	PO1	Level
							6				0	1	2	
15CS553.1	Understand Enumeration and Autoboxing in Developing Efficient Java Programs.	2	2	2	-	3	-	-	-	1	1	2	1	L2 Unde rstan d
15CS553.2	Understand Annotations for developing Efficient Java Programs	2	2	2	-	3	-	-	-	1	1	2	1	L2 Unde rstan d
15CS553.3	Apply Collection Classes and Interfaces for Data Management	1	2	2		3	-	-	-	1	1	2	1	L3 Apply
15CS553.4	Understand Legacy Classes for Data Management and compare with collection classes.	1	2	2	-	3	-	-	-	1	1	2	1	L2 Unde rstan d
15CS553.5	Apply String classes for String Processing Applications.	1	2	3	-	3	-	-	-	1	1	2	1	L3 Apply
15CS553.6	Apply String Buffer classes for String processing applications.	1	2	3	-	3	-	-	-	1	1	2	1	L3 Apply
15CS553.7	Apply Servlet API classes for developing Web application	2	2	3	-	3	-	-	-	1	1	2	1	L3 Apply
15CS553.8	Apply JSP API classes and Interfaces for Web application	2	2	3	-	3	-	-	-	1	1	2	1	L3 Apply
15CS553.9	Apply JDBC/ODBC Classes and Interfaces for handling Databases in Java/J2ee Applications.	2	2	3	-	3	-	-	-	1	1	2	1	L3 Apply
1505553.10	Understand Iransaction	2	2	3	-	3	-	-	-	1	1	2	1	L2

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	processing mechanism for Data base application programming.											Unde
												rstan
												d
Note: Ment	ion the mapp	ing strength as 1, 2, (or 3									

4. Mapping Justification

Mapping		Justification	Mapping Level
со	PO		-
CO1	PO1	Understanding Enumerations for developing java programs we need to apply Knowledge of mathematics.	L2
CO1	PO2	Understanding Enumerations and for developing Java programs we need to analyze complex engineering problems.	L2
CO1	PO3	Understanding Enumerations and Autoboxing for developing Java programs we need to design solutions for complex engineering problems.	L2
CO1	PO4	No need to Conduct investigations of complex problems. No mapping	L2
CO1	PO5	Understanding Enumerations and Autoboxing & for developing Java programs Defnitely we use modern software development tools.	L2
CO1	PO6	No impact on the context of The engineer and society. No mapping	L2
CO1	PO7	No impact on the context of Environment and sustainability. No mapping	L2
CO1	PO8	No Ethical principals involved. No mapping	L2
CO1	PO9	Understanding Enumerations and Autoboxing for developing Java programs and used for developing java applications we need to function as individual and as a team member	L2
CO1	PO10	Understanding Enumerations and Autoboxing for developing Java programs and used for developing java application we need to communicate effectively with the engineering community.	L2
CO1	PO11	Understanding Enumerations and Autoboxing for developing Java programs and used for developing java application we need to Demonstrate the knowledge of engieering and management pronciples for project management.	L2
CO1	PO12	Understanding Enumerations and Autoboxing for developing Java programs needs lifelong learning because the concepts of Enumerations and Autoboxing keeps changing with major Revisons and minor versions.	L2
CO2	PO1	Understanding Annotations for developing java programs we need to apply Knowledge of mathematics. Since it involves reflections	L2
CO2	PO2	Understanding Annotations for developing Java programs we need to analyze complex engineering problems. Since it involves reflections	L2
CO2	PO3	Understanding Annotations for developing Java programs we need to design solutions for complex engineering problems.	L2
CO2	PO4	No need to Conduct investigations of complex problems. No mapping	
CO2	PO5	Understanding Annotations for developing Java programs Defnitely we use modern software development tools. Since it involves reflections	L2
CO2	PO6	No impact on the context of The engineer and society. No mapping	L2
CO2	PO7	No impact on the context of Environment and sustainability. No mapping	L2

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CO2	POo	Inderstanding Annotations for developing Java programs	and	12
002	FOg	used for developing java application we need to function a	s	LZ
		induvidual and as a team member	5	
CO2	PO10	Understanding Annotations for developing Java programs	and	2
		used for developing java application we need to communic	cate	
		effectively with the engineering community.		
CO2	PO11	Understanding Annotations for developing Java programs	and	L2
		used for developing java application we need to Demonstr	ate the	
		knowledge of engieering and management pronciples for	project	
		management.		
CO2	PO12	Understanding Annotations for developing Java programs	needs	L2
		lifelong learning because the concepts annoations keeps c	hanging	
		With major Revisions and minor versions.	to oneby	
03	P01	Applying collection classes for data management we need	to apply	L3
		datatypes and provides abstractions		
<u> </u>	PO2	Applying collection classes for data management we need	1 to	12
003	102	analyze complex engineering problems Since it provides m	nanv	L2
		useful datatypes and provides abstractions	larry	
CO3	PO3	Applying collection classes for data management we need	l to	L3
		design solutions for complex engineering problems.Since i	t	U
		provides many useful datatypes and provides abstractions		
CO3	PO4	No need to Conduct investigations of complex problems. N	10	
		mapping		
CO3	PO5	Applying collection classes for data management Defnitely	, we use	L3
		modern software development tools. Since it provides mar	1y useful	
	- DOC	datatypes and provides abstractions		
CO3	P06	No impact on the context of The engineer and society. No		L3
<u> </u>	DO7	Maimpact on the context of Environment and sustainabilit		
03	F07	mapping	y. NO	L3
CO3	PO8	No Ethical principals involved No mapping		3
CO3	POg	Applying collection classes for data management in develo	opina	<u> </u>
		java applications. we need to function as induvidal and as a	a team	-0
		member.		
CO3	PO10	Applying collection classes for data management in develo	oping	L3
		java applications. we need to communicate effectively with	1 the	
		engineering community.		
CO3	PO11	Applying collection classes for data management in develo	oping	L3
		java applications we need to Demonstrate the knowledge	of	
		engleering and management pronciples for project manag	ement.	
CO3	P012	Applying collection classes for data management in develo	oping	L3
		Java applications. Needs thereing tearning because collection classes API keeps changing with major Pevisons and minor	5H r	
		versions		
CO4	PO1	Understanding Legacy classes for DataManagement and c	ompare	12
004		them with collection classses. Need to apply Knowledge o	f	
		mathematics. Since all legacy classes are re-engineered a	nd	
		Synchronized.		
CO4	PO2	Understanding Legacy classes for DataManagement and c	ompare	L2
		them with collection classses. need to analyze complex		
		engineering problems.Since all legacy classes are re-engineering	neered	
		and Synchronized.		
CO4	PO3	Understanding Legacy classes for DataManagement and c	ompare	L2
		complex engineering problems. Since all logger classes a		
		engineered and Synchronized		
		originiooriou una oynomionizou		

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CO4	PO4	No need to Conduct investigations of complex problems. N mapping	0
CO4	PO5	Understanding Legacy classes for DataManagement and content them with collection classses. In developing java application need to work as a team and as induvidyal members.	ompare L2 ns we
CO4	PO6	No impact on the context of The engineer and society. No mapping	L3
CO4	PO7	No impact on the context of Environment and sustainability mapping	y. No L3
CO4	PO8	No Ethical principals involved. No mapping	L3
CO4	PO9	Understanding Legacy classes for DataManagement and co them with collection classses. Defnitely we use modern sof development tools. Since all legacy classes are re-engine- and Synchronized	ompare L2 Tware ered
CO4	PO10	Understanding Legacy classes for DataManagement and contract them with collection classses. When developing java applied we need to communicate effectively with the engineering community.	ompare L2 cations.
CO4	PO11	Understanding Legacy classes for DataManagement and co them with collection classses.needs lifelong learning becau Legacy classes and Collection classes API keeps changing major Revisons and minor versions.	ompare L2 use with
CO4	PO12	Understanding Legacy classes for DataManagement and contract them with collection classses. we need to Demonstrate the knowledge of engieering and management principles for primanagement.	ompare L2 roject
CO5	PO1	For applying String Classes . We Need to apply Knowledge mathematics. Since String classes are immutable and for manipulating strings.	of L3
CO5	PO2	For applying String, Classes in developing java string proce applications. need to analyze complex engineering problem Since String classes are immutable and for manipulating str	essing L3 ns. rings.
CO5	PO3	For applying String, Classes in developing java string proce applications we need to design solutions for complex engir problems. Since String classes are immutable and for mani strings.	essing L3 neering pulating
CO5	PO4	No need to Conduct investigations of complex problems. N mapping	lo
CO5	PO5	For applying String, Classes in developing java string proce applications Defnitely we use modern software developme tools.	essing L3 ent
CO5	PO6	No impact on the context of The engineer and society. No mapping	L3
CO5	PO7	No impact on the context of Environment and sustainability mapping	y. No L3
CO5	PO8	No Ethical principals involved. No mapping	L3
CO5	PO9	For applying String, Classes in developing java string proce applications we need to function as induvidal and as a team member	essing L3
CO5	PO10	For applying String, Classes in developing java string proce applications we need to communicate effectively with the engineering community.	essing L3
CO5	PO11	For applying String, Classes in developing java string proce applications needs lifelong learning because String Classes keeps changing with major Revisons and minor versions	essing L3 5 API
CO5	PO12	For applying String, Classes in developing java string proce	essing L3

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		applications we need to Demonstrate the knowledge of en	gieering	
		and management principles for project management.	lood to	
000	P01	For applying String Builder and String Builder Classes. We N	eed to	L3
		apply knowledge of mathematics. Since String classes are		
	DOa	Infinutable and for maniputating strings.		
006	P02	For applying String Buffer and String Builder Classes in		L3
		developing Java string processing applications. need to and	ityze	
		complex engineering problems. Since String classes are		
	DOc	Immutable and for maniputating strings.		
000	P03	For applying String Builder and String Builder Classes in	decieve	L3
		developing Java string processing applications we need to a	design	
		solutions for complex engineering problems. Since String c	ldsses	
		are infinutable and for manipulating strings.		
		No need to Conduct investigations of complex problems N		
000	P04	no need to Conduct investigations of complex problems. N	10	
	DOC	Inapping For applying String Duffer Classes and String Duilder Classes		
000	P05	For applying Sinng Builder Classes and Sinng Builder Classes	e lice	L3
		medern seftware development teals	e use	
	DOG	Ne impact on the centert of The ongineer and ceciety. Ne		
000	P06	No impact on the context of the engineer and society. No		L3
		Mapping		
006	P07	No impact on the context of Environment and sustainability	y. NO	L3
		Mapping		
C06	P08	No Etnical principals involved. No mapping		
C06	POg	For applying String Buffer and String Builder Classes in	C	L3
		developing Java string processing applications we need to	runction	
	DQ	as induvidal and as a team member		1 -
C06	PO10	For applying String Buffer and String Builder Classes in		L3
		developing Java string processing applications we need to		
		communicate effectively with the engineering community.		1 -
C06	PO11	For applying String Buffer and String Builder Classes in		L3
		developing Java string processing applications needs theory	ig	
		Rearing because string Classes API keeps changing with m	lajor	
	DO12	Revisoris and minor versions	oloning	
000	P012	For applying sing builder and sing builder classes in dev	o tho	L3
		Java string processing applications we need to Demonstrate	e trie	
		management	TOJECI	
<u> </u>	PO1	For Applying Sondot API Classes to Dovelop Web application	on W/o	10
007	FOI	Need to apply Knowledge of mathematics. Since Services	ovtonds	<u>∟</u> 3
		the functionality of the server to develop dynamic web cor	ntont	
		and to have native support of HTTP	liciti	
<u> </u>	PO2	For Applying Servlet API Classes to Develop Web applicativ		12
007	102	need to analyze complex engineering problems. Since serv	velets	L)
		extends functionality of webserver for scaling the requests	Load	
		balancing session management etc	. Loud	
C07	PO3	For Applying Servlet API Classes to Develop Web application	on we	13
007	103	need to design solutions for complex engineering problem	s Since	L)
		servelets extends functionality of webserver, for scaling the		
		requests, Load balancing, session management etc.	-	
CO7	ΡΟΛ	No need to Conduct investigations of complex problems N		
		mapping		
C.O7	ΡΩς	For Applying Servlet API Classes to Develop Web application	ion.	२
		Definitely we use modern software development tools		-5
C:07	PO6	No impact on the context of The engineer and society. No		2
		mapping		-J
C.O7	PO7	No impact on the context of Environment and sustainability	v. No	2
	,	mapping	,	_5
L	1			

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C07	PO0	For Applying Servlet API Classes to Developing Web applic	nation La	5 ว
	FOg	We need to function as induvidal and as a team member.		3
CO7	PO10	For Applying Servlet API Classes to Develop Web application	on.Wella	3
		need to communicate effectively with the engineering com	munity.	,
CO7	PO11	For Applying Servlet API Classes to Developing Web	L3	3
		application.needs lifelong learning because Web technolo	gies	
		especially in the middle ware keeps changing with major F	Revisons	
		and minor versions.		
CO7	PO12	For Applying Servlet API Classes to Develop Web application	on. we L3	3
		need to Demonstrate the knowledge of engleering and		
C08	PO1	To apply ISP AD classes for developing Web application	X/o 13	2
000	101	Need to apply SSI All relasses for developing web application.	d for	2
		integrating existing web applications. And in the presentation	on laver	
		and to have native support of Http.	,	
CO8	PO2	To apply JSP API classes for developing Web application. V	We need L3	3
		to analyze complex engineering problems since JSP is used	d for	
		integrating existing web applications. for scaling the reque	ests.	
		Load balancing, session management etc.	in poord in the	
000	P03	to design solutions for complex engineering problems. ISP	is used	3
		for integrating existing web applications for scaling the re-	nuests	
		Load balancing, session management etc.	90000	
CO8	PO4	No need to Conduct investigations of complex problems. N	lo La	3
		mapping		
CO8	PO5	To apply JSP API classes for developing Web application	Defnitely L3	3
		We use modern software development tools.		_
	P06	mapping	Le	3
CO8	PO7	No impact on the context of Environment and sustainability	v. No La	3
		mapping		-
CO8	PO8	No Ethical principals involved. No mapping	L3	3
CO8	PO9	To apply JSP API classes for developing Web application w	ve need L3	3
		to function as induvidal and as a team member .		
08	P010	iava applications, we need to communicate effectively with	nag L3	3
		engineering community	lite	
CO8	PO11	To apply JSP API classes for developing Web application n	eeds La	3
		lifelong learning because JSP API and presentation layer		,
		technology keeps changing with major Revisons and minor		
		versions.		
CO8	PO12	To apply JSP API classes for developing Web application w	ve need L3	3
		to Demonstrate the knowledge of engleering and manager	nent	
		To apply IDPC (ODPC classes and interfaces for handling		
COg	FOI	Databases in java / I2EE application We Need to apply Kno	uledae	3
		of mathematics. To connect and execute guery with the da	tabase	
		and to handle JDBC drivers. Protocols and Middleware.		
CO9	PO2	To apply JDBC/ODBC classes and interfaces for handling	L3	3
		Databases in java/J2EE application. We need to analyze co	mplex	
		engineering problems. To connect and execute query with	the	
		database and to handle JDBC drivers. Protocols and Middle	eware.	_
	PO3	Databases in java / IZEE application we need to design solu	tions for L3	3
		complex engineering problems. We apply the concept of		
		connection pooling.		
COg	PO4	No need to Conduct investigations of complex problems. N	lo L3	3

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yright ©2017. cA	AS. All rights reserved		
		mapping	
CO9	PO5	To apply JDBC/ODBC classes and interfaces for handling Databases in java/J2EE application.Defnitely we use modern software development tools. For integrating databases into jav	/a L3
CO9	PO6	No impact on the context of The engineer and society. No mapping	L3
CO9	PO7	No impact on the context of Environment and sustainability. N mapping	lo L3
COg	PO8	No Ethical principals involved. No mapping	L3
CO9	PO9	To apply JDBC/ODBC classes and interfaces for handling Databases in java/J2EE application.we need to function as individual and as a team member .	L3
CO9	PO10	To apply JDBC/ODBC classes and interfaces for handling Databases in java/J2EE application.we need to communicate effectively with the engineering community.	L3
CO9	PO11	To apply JDBC/ODBC classes and interfaces for handling Databases in java/J2EE application. needs lifelong learning because JDBC/OBC classes and interfaces, drivers keep chan with major Revisons and minor versions.	ging L3
CO9	PO12	To apply JDBC/ODBC classes and interfaces for handling Databases in java/J2EE application. we need to Demonstrate t knowledge of engieering and management principles for proje management.	L3 che ect
CO10	PO1	For understanding and applying Transaction processing mechanism for database application programming. We Need apply Knowledge of mathematics. Since it is cruicial for applic in the domians of finance banking and ecommerce and for	L3 to cation

010		mechanism for database application programming. We Need to apply Knowledge of mathematics. Since it is cruicial for application in the domians of finance, banking and ecommerce and for component based development.	L3
CO10	PO2	For understanding and applying Transaction processing mechanism for database application programming. We need to analyze complex engineering problems.Since it is cruicial for application in the domians of finance,banking and ecommerce and for component based development.	L3
CO10	PO3	For understanding and applying Transaction processing mechanism for database application programming.we need to design solutions for complex engineering problems.Since it is cruicial for application in the domians of finance,banking and ecommerce and for component based development.	L32
CO10	PO4	No need to Conduct investigations of complex problems. No mapping	L3
CO10	PO5	For understanding and applying Transaction processing mechanism for database application programming. Defnitely we use modern software development tools.	L3
CO10	PO6	No impact on the context of The engineer and society. No mapping	L3
CO10	PO7	No impact on the context of Environment and sustainability. No mapping	L3
CO10	PO8	No Ethical principals involved. No mapping	L3
CO10	PO9	For understanding and applying Transaction processing mechanism for database application programming. we need to function as individual and as a team member .	L3
CO10	PO10	For understanding and applying Transaction processing mechanism for database application programming. When developing java applications. we need to communicate effectively with the engineering community.	L3
CO10	PO11	For understanding and applying Transaction processing mechanism for database application programming.needs lifelong	L3

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		Learning because Transportion are according to a charge the	

Learning because Transaction processing mechanism I keeps changing with major Revisons and minor versions.CO10PO12For understanding and applying Transaction processingL3	
changing with major Revisons and minor versions.CO10PO12For understanding and applying Transaction processingL3	
CO10 PO12 For understanding and applying Transaction processing L3	
mechanism for database application programming. we need to Demonstrate the knowledge of engieering and management principles for project management.	CO10

Note: Write justification for each CO-PO mapping.

5. Curricular Gap and Content

SNo	Gap Topic	Actions Planned	Schedule Planned	Resources Person	PO Mapping
1					
2					
3					

Note: Write Gap topics from A.4 and add others also.

6. Content Beyond Syllabus

SNo	Gap Topic	Actions Planned	Schedule Planned	Resources Person	PO Mapping
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Note: Anything not covered above is included here.

C. COURSE ASSESSMENT

1. Course Coverage

Mod	Title Teaching No. of question in Exam						CO	Levels		
ule		Hours	CIA-1	CIA-2	CIA-3	Asg	Extra	SEE		
#							Asg			
1	Enumeration,Autoboxing and	8	2	-	-	1	1	2	CO1,	L1, L2
	Annotations								CO2	
2	The collection framework	8	2	-	-	1	1	2	CO3,	L2, L3
									CO4	
3	String Handling	8	-	2	-	1	1	2	CO5,	L2, L3
									CO6	
4	Background, The Life Cycle of a	8	-	2	-	1	1	2	CO7,	L2, L3
	Servlet								C08	
5	The Concept of JDBC	8	-	-	4	1	1	2	CO9,	L2, L3
									CO10	
-	Total	40	4	4	4	5	5	10	-	-

Note: Distinct assignment for each student. 1 Assignment per chapter per student. 1 seminar per test per student.

2. Continuous Internal Assessment (CIA)

Evaluation Weightage in Marks	СО	Levels
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CIA Exam –	1	15	CO1, CO2, CO3,CO4	L1, L2,L2,L3
CIA Exam –	2	15	CO5, CO6, CO7, C08	L2, L3,L2,L3
CIA Exam –	3	15	CO9, CO10	L2, L3
Assignment	- 1	05	CO1, CO2, CO3, CO4	L1, L2,L2,L3
Assignment	- 2	05	CO5, CO6, CO7, CO8	L2, L3,L2,L3
Assignment - 3		05 CO9, CO10		L2, L3
Seminar - 1		05		
Seminar - 2		05		
Seminar - 3		05		
Other Activities – define –		_	CO1 to Co9	L1,L2, L3
Slip test				
Final C	IA Marks	40	-	-

Note : Blooms Level in last column shall match with A.2 above.

D1. TEACHING PLAN - 1

Module - 1

Title:	Enumeration,Autoboxing and Annotations	Appr Time:	8 Hrs
a	Course Outcomes	-	Blooms
-	The student should be able to:	-	Level
1	Understand Enumeration and Autoboxing in Developing Efficient Java Programs.	CO1	L2
2	Understand Annotations for developing Efficient Java Programs	CO2	L2
b	Course Schedule	-	_
Class No	Module Content Covered	СО	Level
1	Enumerations, Autoboxing and Annotations(metadata): Enumerations, Enumeration fundamentals,	CO1	L2
2	the values() and valueOf() Methods, java enumerations are class types, enumerations Inherits Enum,	CO1	L2
3	example, type wrappers,	CO1	L2
4	Autoboxing, Autoboxing and Methods, Autoboxing/Unboxing occurs in Expressions,	CO1	L2
5	Autoboxing/Unboxing, Boolean and character values, Autoboxing/Unboxing helps prevent errors, A word of Warning	CO1	L2
6	Annotations, Annotation basics, specifying retention policy, Obtaining Annotations at run time by use of reflection.	CO2	L2
7	Annotated element Interface. Using Default values.	CO2	L2
8	Marker Annotations, Single Member annotations, Built-In annotations.	CO2	L2
С	Application Areas	CO	Level
1	 We can use enum types when we need to represent a fixed set of constants. We can use enums when a variable can take one out of a small set of possible values Enum considered more type-safe than constants: One of the common use of enums is to prevent the possibility of an invalid parameter. 	CO1	L2
2	 annotation is used to describe the element and clarify its meaning. advanced application for annotations involves reflection and 	CO2	L2

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	annotation processing at run-time.		
			1
d	Review Questions	-	-
1	Explain Enumerations and why it is used.	CO1	L2
2	Discuss Enumerations in Java and C++.	CO1	L2
3	Illustrate Enumerations with an example.	CO1	L2
4	Discuss Values and Values of Methods with syntax and examples.	CO1	L2
5	What are Type wrappers	CO1	L2
6	Explain Autoboxing and Unboxing .	CO1	L2
7	Discuss Autoboxing method parameters.	CO1	L2
8	What are annotations, Explain how annotations are created using	CO2	L2
	interface.		
9	Explain how annotations are obtained at runtime using reflections	CO2	L2
10	Explain marker annotations and Built in Annotations	CO2	L2
			l
е	Experiences	-	-
1			
2			1
3			1

Module – 2

Title:	The Collection framework	Appr	08 Hrs
		l ime:	
a	Course Outcomes	-	Blooms
-	The student should be able to:	-	Level
1	Java Collections Framework provides lots of different useful data	CO3	L3
	types,		
	Java Collections Framework provides abstractions		
2	legacy classes are re-engineered to support generics in JDK5	CO4	L2
	Vector class is one among them.		
	All legacy classes are synchronized		
b	Course Schedule	-	-
Class N	Module Content Covered	<u> </u>	Level
9	The collections and Framework: Collections Overview,	CO3	L3
10	Recent Changes to Collections, The Collection Interfaces, The Collection	CO3	L3
	Classes,		
11	Accessing a collection Via an Iterator, Storing User Defined Classes in	CO3	L3
	Collections,		
12	The Random Access Interface, Working With Maps, Comparators,	CO3	L3
13	The Collection Algorithms,	CO4	L2
14	Why Generic Collections?, The legacy Classes and Interfaces,	CO4	L2
15	Parting Thoughts on Collections.	CO4	L2
16	Worked Examples on Collections. And Sample programs	CO3	L3
С	Application Areas	CO	Level
1	Java Collections Framework provides lots of different useful data	CO3	L3
	types,		
	Java Collections Framework provides abstractions		
2	legacy classes are re-engineered to support generics in JDK5	CO4	L2
	Vector class is one among them.		
	All legacy classes are synchronized		
d	Review Questions	-	-
11	What are Collection framework.	CO3	L3

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12	How generics change the Collection framework	CO3	L3
13	Describe all the collection interfaces.	CO3	L3
14	Describe the methods defined in list interface	CO3	L3
15	Describe the methods defined in Queue interface	CO3	L3
16	Describe the collection classes.	CO3	L3
17	Explain how Iterator used in accessing the collection classes	CO3	L3
18	Describe Legacy classes and interfaces.	CO4	L2
19	Explain How legacy classes are improved in collection framework	CO4	L2
20	Describe Vector, stack, and Hashtable legacy classes	CO4	L2
е	Experiences	-	-
1			
2			
3			

E1. CIA EXAM – 1

a. Model Question Paper - 1

Crs C	Code:	15CS553 Sem: V I Marks: 30	D Time:	75 minute	S				
Cour	rse:	Advanced Java and J2EE							
-	-	Note: Answer any 1 questions, from each part.		Marks	СО	Level			
		PART A							
1	а	Explain Enumerations and why it is used. Discus and C++.	ss Enumerations in Ja	va 5	CO1	L2			
	b	What are annotations, Explain how annotations are created using 5 CO2 L2 nterface.							
	С	What are Type wrappers		5	CO1	L2			
2	а	Discuss Values and Values of Methods with synta	5	CO1	L2				
	b	Explain how annotations are obtained at runtime	using reflections	5	CO2	L2			
	С	Discuss Autoboxing method parameters.		5	CO1	L2			
		PART B							
3	а	What are Collection framework. How generics framework	change the Collecti	on 5	CO3	L3			
	b	Describe Vector, stack, and Hashtable legacy cla	sses	5	CO4	L2			
	С	Describe the methods defined in list interface		5	CO3	L3			
4	а	Explain how Iterator used in accessing the collect	tion classes	5	CO3	L3			
	b	Describe Legacy classes and interfaces.		5	CO4	L2			
	С	Describe the methods defined in Queue interface	<u>,</u>	5	CO3	L3			

CIA Test Paper - 1

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CIA	- #	1	Sem / Div:	V Sem 'A'	Course:	Advanced	Advanced Java Elective:		Y	
De	ept	CSE		&'B'		and J2E	<u>E</u>			
Da	ate:	19-09-18	Time:	9:30 - 10:45	C Code:	15CS55	3	Max	Marks	30
Not	<u>е</u> , У	nswer all full (L questions All	auestions ca	nrv 15 marks					
	No		946516115.7 1	Questions			CO	l evel	Marks	modul
	10			Questions				Lover	Planto	e
1	a	What are En with an exam	What are Enumerations? Explain values() and valuesOf() meth- with an example program						8	1
	b	What is Auto demonstrate	Vhat is Auto Boxing and Un Boxing ? Write a Java Program emonstrate Auto Boxing and UnBoxing.						7	1
		OR								
2	а	Explain the following methods of java.lang.enum with an examp program.					1	L2	8	1
		(1).	ordinal() (ii).	CompareTo()	(iii). equals()					
	b	Explain Type values.	eWrappers v	vith Express	ion boolean a	nd character	2	L2	7	1
3	а	What is collection inte	ection frame erface	work? Expla	in the method	s defined by	3	L2	8	2
	b	Explain the . Arraylist.	Arraylist clas	ss how do y	ou obtain an	array out of	3	L2	7	2
				OR						
4	а	Explain the Constructors of TreeSet Class and write a java program to create TreeSet object and access the elements via Iterator.				java program Iterator.	3	L2	8	2
	b	Explain the r used to acc program	nethods offe ess element	ered by listIte is from a o	erator. Show he collection with	ow Iterator is an example	4	L2	7	2

b. Assignment -1

Note: A distinct assignment to be assigned to each student.

	Model Assignment Questions											
Crs Co	ode:	15CS553	3 Sem: V	l	Marks:	5	Time:	90 - 12	90 – 120 minutes			
Cours	se:	Advance	ed Java and Ja	2EE								
Note:	Each	student	to answer 2-3	assignment	ts. Each as	ssignmen	t carries equal n	nark.				
SNo	I	USN		Assigr	nment De	scription		Mar	ks C	0	Level	
1			Explain Enur example.	nerations h	iow it is	created	, discuss with	an 5	C	D1	L2	
2			What is the ir enumerations	mportance o s. What will	of Values(be return) and Val ed by the	uesof() Methods se two methods	in 5	C	D1	L2	
3 Discuss type Autoboxing me			e wrappers nethod para	s and Aut meters.	toboxing	and explain t	he 5	C	D1	L2		
4			Explain why how annotation	annotations ons are obta	s are calle ained at ru	ed as me Intime usi	etadata and wr ng reflections	ite 5	C	D2	L2	
5			Briefly explai with suitable	n marker a Examples.	annotatior	ns and B	uilt in Annotatic	ns 5	C	D2	L2	
6			Summarize tl And describe	ne interfac briefly abou	es availab ut them	ole in coll	ection framewo	rk. 5	C	D3	L3	
7	7 Explain how list interface is extended from collection interface. Describe the methods defined in list interface briefly.				on 5 ce	C	23	L3				
8			Examine the use briefly.	concrete c	collection	classes a	and illustrate th	eir 5	C	D3	L3	

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9		Ex	olain how all Collection classes can be accessed using via	5	CO3	L3	
		Ite	rator method which is avialable in collection classes.				
10	Describe all the classes available in legacy classes and briefly				CO4	L2	
		ex	plain Vector, stack, and Hashtable legacy classes.				

D2. TEACHING PLAN - 2

Module – 3

Title:	String Handling	Appr Time:	8 Hrs
a	Course Outcomes	-	Blooms
-	The student should be able to:	-	Level
1	Apply String classes for String Processing Applications.	CO5	L3
2	Apply String Buffer classes for String processing applications.	CO6	L3
b	Course Schedule		
Class No	Module Content Covered	CO	Level
1	The String Constructors, String Length, Special String Operations, String Literals, String Concatenation, String Concatenation with Other Data Types, String Conversion.	CO5	L1,L2
2	toString() Character Extraction, charAt(), getChars(), getBytes() toCharArray(), String Comparison, equals() and equalsIgnoreCase(), regionMatches() startsWith() and endsWith(),	CO5	L1,L2
3	equals() Versus == , compareTo() Searching Strings, Modifying a String, substring(), concat(), replace(), trim()	CO5	L1,L2
4	Data Conversion Using valueOf(), Changing the Case of Characters Within a String, Additional String Methods, StringBuffer , StringBuffer Constructors,	CO5	L1,L2
5	length() and capacity(), ensureCapacity(), setLength(), charAt() and setCharAt(),	CO6	L1,L2
6	getChars(),append(), insert(), reverse(), delete() and deleteCharAt(), replace(), substring(),	CO6	L1,L2
7	Additional StringBuffer Methods, StringBuilder	CO6	L1,L2
8	Worked Examples on Strings. And Sample programs	CO5,CO6	L3
С	Application Areas	CO	Level
1	 String class is used to create and manipulate strings. String objects are immutable so it is used in a constant and cannot be changed once created. 	CO5	L3
2	 StringBuffer provides much of the functionality of strings. StringBuffer is used for growable and writable character sequences. 	CO6	L3
d	Keview Questions	-	-
	mutable and immutable string.	005	L3
2	Describe constructors and all the String class methods Briefly with and example.	CO5	L3
3	Explain How string is modified using String class methods.	CO5	L3
4	Describe Conversion and Searching methods of String class.	CO5	L3
5	Explain String Buffer class as peer class of String and constructors.	CO6	L3
6	Describe the methods briefly available in String Buffer Classes.	CO6	L3
e	Experiences	-	-
1			
2			
1 3			

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Module -	- 4		
Title:	Background : Life Cycle of a Servlet	Appr Time:	8Hrs
a	Course Outcomes	-	Blooms
-	The student should be able to:	-	Level
1	Apply Servlet API classes for developing Web application	CO7	L3
2	Apply JSP API classes and Interfaces for Web application	CO8	L3
b	Course Schedule		
Class No	Module Content Covered	СО	Level
1	Background; The Life Cycle of a Servlet	CO7	L1,L2
2	Using Tomcat for Servlet	CO7	L1,L2
	Development; A simple Servlet;		
3	The Servlet API; The Javax.servlet Package;	CO7	L1,L2
	Reading Servlet Parameter; The Javax.servlet.http package;		
4	Handling HTTP Requests and Responses;	CO7	L1,L2
5	Using Cookies; Session Tracking.	CO7	L1,L2
6	Java Server Pages (JSP): JSP, JSP Tags,	CO8	L1,L2
7	Tomcat, Request String, User Sessions, Cookies, SessionObjects	CO8	L1,L2
8	Worked Examples on Servlets and JSPs. And Sample programs	CO7,CO8	L3
С	Application Areas	СО	Level
1	Servlets are commonly used to extend the applications hosted	CO7	L3
	by web servers.		
	Servlets are most popularly used for generating dynamic content		
	on the Web and have native support for HTTP.		
2	JavaServer Pages allows us to integrate with our existing Java	CO8	L3
	Enterprise solutions,		
	JavaServerPages can be used in the presentation layer,		
d	Review Questions	-	-
1	Explain J2EE, CGI and concept of Servlet	CO7	L3
2	Describe Servlet Anatomy and Deployment Descriptor	CO7	L3
3	Illustrate the role of Http request object and response object and cookies	CO7	L3
	In session management		
4	Explain JSP as server side program	CO8	L3
5	Describe the Five types of JSP tags and Briefly explain.	CO8	L3
6	Illustrate how user sessions are handled in JSP.	CO8	L3
е	Experiences	-	-
1			
2			
3			

E2. CIA EXAM – 2

a. Model Question Paper - 2

Crs	Code:	15CS553	Sem:V	1	Marks:	30	Time:	75 minute	S	
Cοι	irse:	Advanced .	JAVA and J2	EE						
-	-	Note: Answer any 1 questions, from each part.				Marks	СО	Level		
			-		PART A					
1	a	Describe C	onversion a	nd Search	ning methods	s of String	g class.	5	CO5	L3

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			V P P

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	b	Describe the methods briefly available in String Buffer Classes.	5	CO6	L3
	С	Describe constructors and all the String class methods Briefly with and	5	CO5	L3
		example.			
2	a	Describe Servlet Anatomy and Deployment Descriptor	5	CO7	L3
	b	Describe the Five types of JSP tags and Briefly explain.	5	CO8	L3
	С	Illustrate the role of Http request object and response object and cookies	5	CO7	L3
		in session management			
		PART B			
3	a	Explain How string is modified using String class methods.	5	CO5	L3
	b	Explain String Buffer class as peer class of String and constructors.	5	CO6	L3
	С	Explain String, String Builder and StringBuffer classes classifying as	5	CO5	L3
		mutable and immutable string.			
4	a	Explain JSP as server side program	5	CO8	L3
	b	Illustrate how user sessions are handled in JSP.	5	CO8	L3
	С	Explain J2EE, CGI and concept of Servlet	5	CO7	L3

CIA Test Paper - 2

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CIA	#	2	Sem / Div:	V 'A'	Course:	Advanced	Java	Elec	tive:	Y		
De	ept	CSE				and J2EE						
Da	ate:	27-10-18	Time:	9:30 - 10:45	C Code:	15CS55	3	Max M	Marks:	30		
Note: Answer all full questions. All questions carry 15 marks.												
Q	No			Questions	5		СО	Level	Marks	modu		
								le				
1	а	What is String	s in Java? Wr	nstrates any six	CO5	L2	8	3				
		constructors of	f strings class.		-							
	b	Differentiate b	etween equal	g comparisons.	CO5	L2	7	3				
		Explain thd foll	owing charact.									
		i) charAt()	ii) toCharArra									
2	а	Explain how to	modify a string	g using followi	ng methods.		CO5	L2	8	3		
		i) SubString i	i) replace(). Iii)	conCat() iii)	trim()							
	b	Explain any tw	o constructor	s and the foll	owing methods.	of String Buffer	CO6	L2	7	3		
		Class.										
		 append() ii) r 	reverse iii) inse	rt() iv) replace	()							
									-			
3	а	Explain the foll	owing string c	omparison me	thods with examp	oles.	CO5	L2	8	3		
		 equals(), II) re 	egionMatches()	iii). StartsWitr		compare I o()	000					
	Ø	what is the o Builder class.	aimerence bet	ween String	class, StringBuffe	er class, String	006	L2	7	3		
				OR								
4	а	Explain the JDI	BC driver types	6.			CO7	L2	8	4		
	b	Explain the cor	ncept of JDBC				CO7	L2	7	4		

b. Assignment – 2

Note: A distinct assignment to be assigned to each student.

	Model Assignment Questions										
Crs C	ode:	CS501PC	C Sem:	1	Marks:	5 / 10	Time:	90 - 120	minute	S	
Cours	se:	Design a	ind Analysis o	of Algorithm	IS						
Note:	lote: Each student to answer 2-3 assignments. Each assignment carries equal mark.										
SNo		USN		Assig	nment Desc	ription		Marks	CO	Level	
1			Describe Str Operations.	ring constr	uctors and	all the	Special Strir	ng 5	CO5	L3	
2	2 Explain How string is modified using Character Extraction and String comparisons						nd 5	CO5	L3		
3	3 Describe String Conversion and String Searching methods of String class.						of 5	CO5	L3		
4	4 Explain String Buffer Constructors and String Buffer as pee class of String						er 5	CO6	L3		
5	5 Describe the Additional methods available in String Buffe Classes.						er 5	CO6	L3		
6			Differentiate interface pro	between J gramming	ava Servlet	and Co	mmon Gatewa	ay 5	CO7	L3	
7	7 Illustrate the role of Http request object and response object in reading data from client.Explain Http request header and Http response header.						ct 5 nd	CO7	L3		
8			Explain Java Describe the	a Server P Java Serve	ages as se r Pages tags	erver side briefly.	e program ar	nd 5	CO8	L3	
9			Describe how handled in Ja	w methods ava Server F	, Control S Pages.	tatement	and Loops a	re 5	CO8	L3	
10			Illustrate cor Java Server F	nmonly use Pages.	ed methods	to track	user sessions	in 5	CO8	L3	

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Module – 5

Title:	The Concept of JDBC	Appr Time	8 Hrs
a	Course Outcomes	_	Blooms
-	The student should be able to:	_	
1	Apply JDBC/ODBC Classes and Interfaces for handling Databases in	CO9	L3
2	Understand Transaction processing mechanism for Data base application	C:010	3
_	programming.	0010	25
b	Course Schedule		
Class No	Module Content Covered	СО	Level
1	The Concept of JDBC;	CO9	L3
2	JDBC Driver Types; JDBC Packages;	CO9	L3
3	A Brief Overview of the JDBC process; Database Connection; Associating the JDBC/ODBC Bridge with the Database,	CO9	L3
4	Statement Objects,	COg	L3
5	ResultSet,	CO9	L3
6	Transaction Processing,	CO10	L2
7	Metadata, Data types, Exceptions.	CO10	L2
8	Worked Examples on JDBC. And Sample programs	CO9,C10	L3
С	Application Areas	СО	Level
1	 Java JDBC is used to connect and execute query with the database. JDBC drivers are written in Java language it is more secured. 	CO9	L3
2	 Transaction processing is crucial requirements for large enterprise applications in the domains of finance, banking and electronic commerce. Transcation processing is used for Component Based Development. 	CO10	L2
A	Deview Questiens		
a	Review Questions	-	-
1		COg	<u> </u>
2	Verite Different IDPC Driver Types	<u> </u>	<u> </u>
3	Illustrate the Brief Overview of IDBC Process		<u> </u>
<u> </u>	Evolain how Database Connection established in J2FE	COo	<u>L</u> ⊃
6	Write the concept of Connection pool		<u>_</u>
7	What is the use of ResultSet Object		<u>_</u>
8	Explain how Data read from Result Set object and Scrollable Resultset	C.O.0	<u> </u>
0	Define Statement Object. Prepared statement and Callable Statement	C10	<u> </u>
10	Illustrate the Concept of transaction processing.	C10	2
11	What is MetaData and Result Set Metadata.	C10	2
12	Explain the Role of Commit and RoleBack in Transaction processing	C10	 L2
е	Experiences	-	_
1			
2			
3			

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E3. CIA EXAM – 3

a. Model Question Paper - 3

Crs (Code	15CS553	Sem:	V	Marks:	30	Time:	75 minute	S	
Cour	rse:	Advanced	JAVA and	J2EE						
-	-	Note: Ansv	wer any 1	questions	s, from each pa	art.		Marks	СО	Level
			-		PART A					
1	а	Explain Dat	tabase Scl	nema, No	rmalization,Fur	nctional D	ependency	5	CO9	L3
	b	Describe th	ne Concep	t of JDBC	<u>}</u>			5	CO9	L3
	С	Define Stat	ement Ob	ject, Prep	ared statemer	it and Cal	lable Statement	5	C10	L2
2	а	Write Different JDBC Driver Types.							CO9	L3
	b	Illustrate the Brief Overview of JDBC Process						5	CO9	L3
	С	Illustrate th	ne Concep	t of trans	action processi	ng.		5	C10	L2
					PART B					
3	а	Explain hov	w Databas	e Connec	tion establishe	ed in J2EE		5	CO9	L3
	b	Write the c	concept of	Connect	on pool.			5	CO9	L3
	С	What is Me	etaData an	d Result S	Set Metadata.			5	C10	L2
4	а	What is the	e use of Re	esultSet C	bject.			5	CO9	L3
	b	Explain hov	w Data rea	d from R	esult Set objec	t and Scro	ollable Resultset.	5	CO9	L3
	С	Explain the	Role of C	ommit an	d RoleBack in	Transactio	on processing	5	C10	L2

CIA Test Paper - 3

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CIA	- #	3	Sem / Div:	V 'A'	Course:	Advanced.	Java	ava Elective:		Y	
De	ept	CSE				and J2EE					
Da	ite:	24-11-18	Time:	9:30 - 10:45	C Code:	15CS55	3	Max	Marks:	30	
Note: Answer all full questions. All questions carry 15 marks.											
Q	QNo Questions						СО	Level	Marks	modul	
								е			
1	а	What is Servele	et? Explain the		C07	L2	8	4			
	b	Write a short ne	otes on HTTP I	ect.	C07	L2	7	4			
				OR							
2	а	Define JSP ? Ex	plain different	JSP Tags by t	aking suitable exa	imple.	CO8	L3	8	4	
	b	What is Sessior	n tracking ? Ho	w it is done in	JSP		CO8	L2	7	4	
3	а	Explain statem	ent object, Cal	lable object, p	repared statemer	nt object.	CO9	L2	8	5	
	b	Explain scrollat	ole result set a	nd updatable	resultset.		CO9	L2	7	5	
4	а	What is Transa transcactions.	ction processi	ng ? Write a ja	iva program to ex	ecute database	CO10	L3	8	5	
	b	Explain the ste	ps in JDBC pro	cess			CO9	L2	7	5	

b. Assignment – 3

Note: A distinct assignment to be assigned to each student.

	Model Assignment Questions										
Crs C	ode:	CS501P	C Sem:		Marks:	5 / 10	Time:	90 - 120	minute	S	
Cours	Course: Design and Analysis of Algorithms										
Note:	Note: Each student to answer 2-3 assignments. Each assignment carries equal mark.										
SNo		USN		ŀ	Assignment Des	cription		Marks	со	Level	
1			Explain the principles	ne concep ;,	t of J2EE Databa	ase Schem	a, Normalizatic	n 5	CO9	L3	
2	2 Describe the Concept of Primary key, Secondary key ar Foriegn key.								CO9	L3	
3	Discuss the concept of JDBC and Write Different JDBC Driver Specifications.								COg	L3	
4	4 Illustrate the Process for interacting the Databases usin JDBC Process routines.						g 5	CO9	L3		
5	5 Apply the connection component and create connection object . Explain the steps in establishing the connection to databases in J2EE					on 5 :0	CO9	L3			
6			Explain B	riefly the a	concept of Conr	ection poc	ol.	5	CO9	L3	
7			What is tł methods	ne use of I	ResultSet Object	t. And Expl	ain the availab	le 5	CO9	L3	
8			Explain ł Scrollable	now Data e Resultse	is read from t Object.	Result S	Set object an	d 5	COg	L3	
9	Discuss the concept of Statement Object and when it is used also explain Prepared statement and Callable Statement with its associated methods.					d, 5 :h	C10	L2			
10	10 Illustrate the Concept of transaction processing in J2EE Enterprise application.						E 5	C10	L2		
11			What is №	1etaData a	nd Result Set M	etadata Ex	plain Briefly.	5	C10	L2	
12			Explain t processin	he Role (g	of Commit and	RoleBack	in Transactic	on 5	C10	L2	

F. EXAM PREPARATION

1. University Model Question Paper

Course:	Advanced JAV	dvanced JAVA and J2EE					May /2018
Crs Code:	15CS553	Sem:	V	Marks:	100	Time:	180 minutes

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	Note	Answer all FIVE full questions. All questions carry equal marks.	Marks	СО	Level
1	a	What is the importance of Values() and Valuesof() Methods in	6	CO1	12
-		enumerations. What will be returned by these two methods.	Ŭ	001	
	b	Discuss type wrappers and Autoboxing and explain the Autoboxing	4	CO1	L2
		method parameters.	•		
	с	Explain why annotations are called as metadata and write how	6	CO2	L2
		annotations are obtained at runtime using reflections			
		OR			
-	a	Explain Enumerations . Why it is used with an example	6	CO1	L2
	b	Discuss Autoboxing method parameters.	4	CO1	L2
	с	Explain Market Annotations and Built in Annotations	6	C02	L2
2	а	Describe the collection classes.	6	CO3	L3
	b	Explain how Iterator used in accessing the collection classes		CO3	L3
	с	Describe Legacy classes and interfaces.	4	CO4	L2
		OR			
-	a	Explain all the collection interfaces with examples.	6	CO3	L3
	b	Describe the methods defined in list interface	4	CO3	L3
	C	Explain with an example Vector, stack, and Hashtable, legacy classes	6	CO ₄	
				1	
3	а	Explain How string is modified using String class methods.	6	CO5	13
	b	Describe. Conversion and Searching methods of String class.	6	CO5	<u> </u>
	С С	Explain String Buffer class as peer class of String and constructors	<u>с</u> Л	<u> </u>	13
		OR	4	000	
-	a	Explain String String Builder and StringBuffer classes classifying as	6	CO5	13
		mutable and immutable string.	Ŭ	000	
	b	Describe constructors and all the String class methods Briefly with and		CO5	L3
		example.			
	с	Describe the methods briefly available in String Buffer Classes.		CO6	L3
4	a	What is a servlet ? Explain the phases of Servlet Life Cycle.		C7	L2
	b	Write a servlet Program to illustrate how to use session state.	6	C7	L3
	с	Explain the advantages of servlet over CGI		, C7	L2
		OR			
-	а	Explain different JSP Tags. Write a program to show usage of these tags.	6	C7	L3
	b	Illustrate the role of Http request object and response object in reading	6	C7	L2
		data from client.Explain Http request header and Http response header.			
	С	Illustrate commonly used methods to track user sessions in Java Server	4	C8	L3
		Pages.			
5	a	Describe the various process of JDBC Process with Code Snippet.	7	C9	L3
	b	Explain Callable Statement with an Example	5	C9	L3
	С	Explain different types of drivers used in JDBC	4	C9	L2
		OR		C9	
	a	What is the use of ResultSet Object. And Explain the available methods	6	C9	L2
	b	Explain the concept of connection pooling	4	C9	L2
	С	Discuss the concept of Statement Object and when it is used, also	6	C10	L3
		explain Prepared statement and Callable Statement with its associated			
		methods.			

2. SEE Important Questions

Course:		Advanced Java and J2EE					Month	/ Year	Aug /2	2018
Crs Code:		15CS553	Sem:	V	Marks:	80	Time:		180 mi	nutes
	Note	Answer all FIVI	Answer all FIVE full questions. All questions carry equal marks.						-	
Mc	Qno.	Important Que	stion					Marks	СО	Year

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dul							

aui					
e 1	1	What are Enumerations 2 Evalain values() and values of () methods with	4	CO1	2019
1	1	an example		001	2010 Jan
	2	All example	4	CO1	2019
	2	what is Autoboxing? while a Java to demonstrate autoboxing and un	4	001	2010
	-	DOXING	0	<u> </u>	Jan
	3	what are annotations? Explain the following Builtin annotations with	0	02	2010
		program as an example governde ginnented gretention	0	CO1	Jan
	4	explain the following methods of Java.lang.Enum with an example	8	01	2018
		Diogrammy ordinally my compare roly in equalsy		<u> </u>	Jan
	5	Explain now to obtain annotations at Runtime by use of reflections	0	02	2010
					Jan
			0	<u> </u>	0010
2	1	what is collection Framework? Explain the methods defined by	8	CO3	2018
			-	0.01	Jan
	2	Explain the methods defined by List Iterator interface.	8	CO3	2018
				0.01	Jan
	3	Explain the constructors of TreeSet class and write a java program to	8	CO3	2018
		create TreeSet collection and access in via an Iterator.			Jan
	4	Explain any four legacy classes of Java's Collection framework.	8	CO4	2018
					Jan
3	1	What is string in Java? Write a java program that demonstrates any four	8	CO5	2018
		constructors of string class.			Jan
	2	Differentiate between equals() and == with respect to string comparison	4	CO5	2018
					Jan
	3	Explain the following character Extraction methods. i) CharAt	4	CO5	2018
		ii) toCharArray()			Jan
	4	Explain how to modify a string by using following methods I) substring()	8	CO5	2018
		ii) concat() iii)replace() iv) trim()			Jan
	5	Explain the following methods of String Buffer Class I) append() ii)insert iii)	4	CO6	2018
		reverse() iv) replace()			Jan
4	1	Explain the life cycle of Servlets	8	CO7	2018
					Jan
	2	List and explain core classes and interfaces in javax.servlet package.	4	CO7	2018
					Jan
	3	Write Short notes on HTTP request and response	4	CO7	2018
					Jan
	4	What is a Cookie? List out methods defined by cookie? Write a java	8	CO7	2018
		program to add a cookie.			Jan
	5	Define JSP Explain different types of JSP tags by taking a suitable	8	CO8	2018
		example			Jan
5	1	Explain the four types of JDBC drivers.	6	CO9	2018
					Jan
	2	Describe the various steps of JDBC with code snippets.	10	CO9	2018
					Jan
	3	Write a Java program to execute a database transaction		CO10	2018
					Jan
	4	Explain I) Callable statement object ii) prepared statement object.	8	CO9	2018
					Jan